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November 12, 2014

Your file *Votre référence*
N3L3-0570

Our file *Notre référence*
14-HCAA-01426

Inuvialuit Water Board
Attention: Liz Castaneda
P.O. Box 1326
5101 – 50th Avenue
Suite 300, Greenstone Building
Yellowknife, NT X1A 2N9

Subject: Hamlet of Aklavik Water Licence Renewal

The Fisheries Protection Program (the Program) of Fisheries and Oceans Canada (DFO) has reviewed the information submitted to the Inuvialuit Water Board (IWB) for the review of the application for renewal of the Type B municipal water licence #N3L3-0570 and is providing its recommendations, as requested, on our assessment of potential impacts to fish and fish habitat and other matters of importance to the Water Licence Renewal Application.

The Program is providing specialist advice related to the assessment of potential impacts to fish and fish habitat pursuant to DFO's mandate under the *Fisheries Act* and the *Species at Risk Act*.

DFO recommendations for the IWB:

- The Hamlet of Aklavik (the Applicant) should expect comment from Environment Canada regarding effluent quality as it relates to the pollution prevention provisions of the *Fisheries Act*;
- DFO has no other concerns with the Project at this time.

Thank you for the opportunity to review and comment on the proposed Water Licence Renewal.

If you have any questions, please contact Kyle Antonchuk at our Winnipeg office at 204-984-6215, by fax at 204-984-2404, or by email at kyle.antonchuk@dfp-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

*

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Debbie Ming', with a stylized flourish at the end.

Debbie Ming
Acting Regional Manager, Regulatory Reviews
Fisheries Protection Program

Cc: Kyle Antonchuk – DFO, Winnipeg
Richard Janusz – DFO, Winnipeg



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November 17, 2014

Liz Castaneda
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**Re: Hamlet of Aklavik
Water Licence Application – N3L3-0570
Type B Municipal Water Licence Renewal
Request for Review and Comments**

Dear Ms. Castaneda,

The Department of Environment and Natural Resources has reviewed the application at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, *Waters Act* and the *Wildlife Act* and provides the following comments and recommendations for the consideration of the Board.

Response to Hamlet of Aklavik Type B Water Licence Renewal Application

ENR commends the community of Aklavik on a number of actions that have been taken since its last Water Licence renewal to improve management of waste and water in the community, including the following:

- Development of an Operations and Maintenance Manual for the Solid Waste Disposal Site and Lagoon;
- development of a Spill Contingency Plan;
- Work to improve signage and segregation at the Solid Waste Disposal Site; and
- Collaboration with ENR and contractors to complete a Municipal Hazardous Waste Inventory in 2013

Topic 1: Hazardous Waste Management

Comment(s):

Section D.9 of the Water Licence discusses the segregation and temporary storage of hazardous waste. As noted by the AANDC water inspector in the Water Licence inspection of 2011, the Hamlet of Aklavik has been working to improve segregation and signage for waste streams, including hazardous waste. However, there are still a number of improvements to hazardous waste management and signage that should be carried out.

Recommendation(s):

1) ENR recommends that the Hamlet of Aklavik develop and implement a community Hazardous Waste Management Plan (HWMP), following the guidelines *Developing a Community-based Hazardous Waste Management Plan* (ENR 2011) and *Guideline for the General Management of Hazardous Waste in the NWT*. ENR staff would be happy to provide assistance to community members in creating and implementing this plan. Creating and implementing a Community Hazardous Waste Management Plan would guide work in the following areas, some of which have been identified as priority topics to address in previous Water Licence inspection reports and the *Solid Waste Site Evaluation* (2009):

- Determine acceptable and unacceptable types of hazardous waste;
- Erect additional signage to guide increased segregation and organization of waste streams, including hazardous wastes such as batteries, used oil, refrigerators/freezers, etc.);
- Construct a lined, bermed area to collect and temporarily store hazardous wastes;
- Plan and carry out regular removal of hazardous wastes which should only be stored temporarily at the Solid Waste Disposal Facility;

Topic 2: Contaminated Soil at the Solid Waste Disposal Facility

Comment(s):

Contaminated soil is a large and expensive problem. When contaminated soil from the industrial, commercial and institutional sectors is deposited at community Solid Waste Disposal Facility (SWDF) sites, the costly liability and responsibility for cleaning up and managing the contaminated soil can become the responsibility of the community government.

Recommendation(s):

- 1) ENR recommends that an additional clause be added to the Water Licence which specifies that contaminated soil from the industrial, commercial or institutional (ICI) sectors may not be accepted into the community SWDF, unless a specific agreement with the Hamlet is arranged which specifies that the contaminated soil will only be stored temporarily at the site and/or the generator of the contaminated soil commits to retaining financial responsibility for remediating and/or safely disposing of the contaminated soil. The conditions for accepting contaminated soil from the residential of ICI sector are outlined in the HWMP.

Topic 3: Landfill Gate, Fencing and Cover**Comment(s):**

The SWDF site is not currently fenced. Cover is not regularly placed over recently disposed waste.

Recommendation(s):

- 1) ENR recommends that the Hamlet of Aklavik erect a fence and gate at the SWDF, and that the Hamlet consider keeping the facility closed, except during set operating hours. This would facilitate improved management and segregation of wastes, and in particular hazardous wastes. Two techniques to deal with the concern of illegal dumping when a landfill is fenced and gated that have been successfully implemented by other communities include the following:
 - a) Keep a key to the landfill at the hamlet office that people can sign out, when they disclose what materials they plan to take to the landfill, and
 - b) Set up a large dumpster adjacent to the gate where people can drop off household garbage if the gate is closed, as an alternative to random dumping.
- 2) In addition to improving hazardous waste management, fencing and gating at the landfill will prevent wildlife such as bears from accessing the waste in the landfill, which preserves the health of such wildlife, and will reduce community – bear encounters and potential conflicts.
- 3) Fencing around the landfill will also improve litter control at the site, including the option of erecting a fence just around the active face of the landfill.
- 4) An alternative recommendation to fencing the entire site would be to gate the entrance to the facility, and use regular cover to cover waste that is disposed of. The application of regular cover would reduce the attractiveness of the landfill to wildlife such as bears, and reduce wind-blown litter problems.

Topic 4: Spill Contingency Plan

Comment(s):

The current Spill Contingency Plan (SCP) which has been submitted states that a maximum of 100 litres of oil is currently stored at the Solid Waste Disposal Facility. The ENR *Municipal Hazardous Waste Inventory Project – Beaufort Delta* (attached) completed in 2013 provided a summary of hazardous wastes present at the Aklavik SWDF site. This report describes drummed wastes, pails of waste, lead acid batteries, fuel tanks, fridges/freezers and vehicles present at the SWDF, including an estimated 6,970 litres of drummed wastes.

Recommendation(s):

- 1) ENR recommends that the SCP be revised with these updated hazardous waste material categories and amounts, and that the Hazardous Waste Inventory Report for the Beaufort Delta be added to the Inuvialuit Water Board public registry.

Topic 5: Water Licence Conditions

Comment(s):

That the Inuvialuit Water Board include the following conditions into the corresponding sections of the Hamlet of Aklavik Water Licence, to be consistent with other Water Licences issued in the NWT:

1) Part A - Scope and Definitions

- A definition for “Engineer”, “Freeboard” and “Surveillance Network Program”. The definition of Inspector should be updated to refer to the new “Waters” Act which came to force in 2014.

2) Part B - General Conditions:

- Results of any inspections of all dams, berms, dykes and control structures;
- Results of yearly staff inspections of the SWDF and any corrective actions, as necessary;
- Summary of sludge management activities, if any
- The inclusion of all correspondence between the inspector and the Licensee;
- The Board may also wish to separate B:1 j) into 4 sub-conditions, for “any revisions to the approved SWDF Operation & Maintenance”, “any revisions to the approved SCP”, “any revisions to the Closure and Reclamation Plan”, “any revisions to the approved SCP”.

3) Part D – Conditions Applying to Waste Disposal

- The following containment wording to be added to Part D:9 “The Licensee shall segregate and store hazardous waste in a **designated contained** temporary storage area, to the satisfaction of an inspector.”
- Add the condition “*The Licensee shall maintain the SWDF to the satisfaction of an inspector.*”

4) Part [To be determined] – Conditions Applying to Contingency Planning

A condition for spill contingency planning currently exists under Aklavik “Part E – Conditions Applying to Operation and Maintenance”. To be consistent with Water Licencing issuance throughout the NWT, a complete section relating to “*Conditions Applying to Contingency Planning*” (typically preceding “Closure and Reclamation Section”) should be added to Aklavik Water Licence, and include the following conditions:

- *The Licensee shall review the Spill Contingency Plan annually and, if necessary, modify the plan to reflect changes in operation(s) and technology. Any updated Spill Contingency Plan shall be submitted to the Board for approval.*
- *If, during the period of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:*
 - Employ the appropriate contingency plan;*
 - Report the incident immediately via the 24-hour NWT Spill Report Line. Currently the number is (867) 920-8130; and*
 - Submit to an Inspector a detailed report on each occurrence not later than thirty (30) days after initially reporting the event.*

5) Part H – Conditions Applying to Closure and Reclamation

- All references to “Abandonment and Restoration” (eg. Part H) found throughout Aklavik Water Licence should be replaced with the more current and appropriate term of “Closure and Reclamation”.

Topic 6: Aklavik Site-specific Requirements for Sewage Treatment Plan, and SCP

Comment(s):

Aklavik is located in an area susceptible to seasonal flooding, and the 2011 inspection report recommends the Hamlet to be pro-active and to plan/implement procedures/measures prior to flood events in order to mitigate the risks to human health within the communities as well as impact on surrounding water resources. As such, several specific procedures should be added to Aklavik management plans to provide provision for flood planning. For example, and based on information provided

in 2011 inspection report, the Sewage Treatment Plan (STP) should describe and include alternative temporary sewage storage measures and management procedures (eg. extra sewage tanks; emptying sewage tanks more frequently prior to flood season so capacity exists while the sewage lagoon is inaccessible; use of an alternative location for sewage discharge, rather than discharging into the river; etc.). The SCP should provide best practices for emergency response to a flood scenario when the sewage lagoon is not accessible. This could include a list of alternative options (such as mentioned with here above STP) to be used prior the least desired option i.e. discharge to a water body. As well, response scenarios should also be developed to handle leachates escaping from wastes that are/have been in contact with flood water. All response scenarios should include pre-determined and best possible emergency responses to adequately prepare to all spills possibilities and prevent impacts to water/environment/human health.

The requirement for a SCP and STP should be included as specific conditions in the Water Licence. Guidance on the contents of these plans should be included in schedules to the Water Licence. To this schedule list may be added site-specific components, as enumerated within the last inspection report and here above (August 2011 at time of review), in order to foster/encourage the Hamlet to plan ahead of time and implement adequate mitigation capacity measures/procedures/structures that will help minimize risk to human health and impacts on surrounding water resources and environment.

Recommendation(s):

- 1) ENR recommends the SCP and a STP flood-specific procedures be integrated as requirements of the Water Licence. Specific information on the contents of the plans should be included in schedules to the Water Licence.

Topic 7: Water Management and Water Quality Assessment

Comment(s):

The Hamlet of Aklavik SWDF site investigation identifies, no. 5, that there is currently no evidence of management of surface water or snow at the site and that there is ponding of water in waste areas. Furthermore, a letter from the Hamlet of Aklavik dated October 20th 2014 specifies that there are no existing engineering drawings for the existing SWDF, no covering practices, no storage and treatment system for contaminated drainage water, that hazardous wastes are separated somewhat from other wastes, and that the SWDF does not have a separate bermed area for storage of hazardous wastes and that at this time, shipments of hazardous wastes are not being considered but that this option will be further studied in the future.

Along with the above comments on management plans, ENR recommends that the Board requires an investigative study to identify potential impact pathways between the SWDF and the surrounding environment and to characterize the current status of

surface water at the SWDF and the surrounding environment. This evaluation could include groundwater investigations.

Characterization of the Aklavik SWDF surface and groundwater resources will help inform the Hamlet of any potential risks to human health and/or the environment related water at the SWDF. This information will also useful when planning for closure and reclamation of Aklavik's current SWDF site.

Recommendation(s):

- 1) ENR recommends that a condition of the Water Licence be included requiring that an evaluation be conducted to identify potential impact pathways from the SWDF to the surrounding environment and identify investigations that are required to determine whether the SWDF is causing impacts to the surrounding environment. ENR notes that the findings of these investigations could contribute to closure and reclamation planning of the SWDF.

Topic 8: Operation and Maintenance Plan and Hazardous Waste Management

Comment(s):

Aklavik experiences seasonal flooding, and resulting water pooling and drainage issues; therefore, several hazardous waste management practices should be addressed in order to minimize risks to human health and the environment related to flooding of the hazardous waste storage areas.

The Water Licence should include a requirement for a Hazardous Waste Management Plan (HWMP). In addition to the standard requirements, the HWMP should also include sections related to flooding. These considerations should include: proper segregation of storage items, discontinuation (if not already in force) of the acceptance of contaminated soils at the SWDF, removal & shipment of contaminated soils currently stored at the SWDF to an approved soil treatment facility, regular shipments of hazardous materials to an approved licenced receiver, re-location to higher ground/platforms of any sources of contamination that may be accessed by flood water, Temporary hazardous waste storage/collection locations and structures (tanks) with berms/liners designed and located in a flood protected area, pooling prevention/corrections measures, drainages construction measures, etc).

The HWMP could be included either as a sub-section of the Operations and Maintenance Plan OMP), or as a stand-alone plan.

Recommendation(s):

- 1) ENR recommends that the Water Licence the submission of a HWMP. The plan should include site-specific management practices to mitigate impacts due to flooding.

Topic 9: Operations and Maintenance Plan – Public Education

Comment(s):

Several reports have outlined the need for public education for the Hamlet population to recognize the importance of following the requirements and best management practices outlined in the Water Licence management plans.

Considering Aklavik's setting in a flood-prone location, ENR would encourage the Inuvialuit Water Board to look at ways to facilitate public education. While the Hamlet is already using a special waste/transport collection program, the Board may consider special visits/workshops promoting educative templates/tools aiming to enhance public knowledge and improve/establish best management practices. Initiatives such as ENR programs to develop proper Household Hazardous Waste (HHW) storage and handling (empty propane containers, waste batteries, paint containers, ect.) should be encouraged and implemented in the Hamlet to promote good waste management practices and reinforce the importance of minimizing risks through waste management practices that prevent and mitigate the exposure of waste to water and floods. The Hamlet may arrange with ENR-Waste Reduction Department to visit the community for a workshop on ideas to reduce the amount of wastes that is being introduced into the Aklavik SWDF.

Best management practice information sessions should also include information on interpreting a Water Licence, and communicate the importance of following the SWDF management practices already outlined in the Water Licence, i.e. SWDF operation and maintenance with respect to wind-blown materials, uses/maintenance of signs for waste segregation, disposal of waste at the assigned location (segregation), proper covering of waste material at each SWDF cell, etc.

Recommendation(s):

- 1) ENR recommends that the Board consider various initiatives either within their organization, or through external agencies, to develop amongst the population and staff of Aklavik, an understanding of the importance of implementing best waste management practices.

Topic 10: Operation and Maintenance Plan) – Annual Reporting of Data

Comment(s):

The OMP specifies, section 3.6 (p. 9 of 18) that records should be kept to assist in planning with yearly operations and to assist in the evaluation of the effectiveness of the sewage treatment facility.

To align with conditions of the Water Licence found in Part B 1 e) and provide clear guidance to staff when consulting the OMP, this section of the OMP should also specify that these results are to be submitted yearly as part of the Hamlet's Water Licence annual reporting requirement.

Recommendation(s):

- 1) ENR recommends for section 3.6 of Aklavik OMP to be updated to specify that results and lab data from record keeping and monitoring should be included in the Water Licence annual reporting requirement.

Topic 11: Spill Contingency Plan – Response Staff Contact Information

Comment(s):

The SCP, section 5, specifies which personnel possess specific training. However, the SCP does not clearly identify the pre-determined spill response personnel along with their associated duties and contact information (24 hour telephone number for those responsible of activating the SCP).

Addition of this contact information within the SCP will allow for quick identification and contact of staff that are part of the spill response structure/team – and allow for the most efficient communication practices in the event of a spill emergency situation.

Recommendation(s):

- 1) ENR recommends for the Aklavik spill response personnel contact information to be updated and included within SCP submitted to the Board.

Topic 12: Spill Contingency Plan – Procedures for Spill Containment

Comment(s):

Section 3.1 of the SCP provides several most probable spill scenarios that may occur during waste management operations. Through this section, several preventative useful measures were identified. However, ENR recommends that further details on the actions to be taken for each types of spill be further described in order to best

support/prepare the response staff/personnel dealing with the containment and clean-up of these spills.

Recommendation(s):

- 1) ENR recommends the Aklavik SRP include additional detail to provide personnel further details on required response actions and methods to be used in containing various types of spills, as described within section 3.1.
- 2) ENR also recommends for the addition of a scenario to prevent discharge to the Peel River, as described in comment further above applying to STF and SCP site-specific requirements.

Comments and recommendations were provided by ENR technical experts in the Water Resources Division, the Environment Division and the Inuvik Region and were coordinated and collated by the Environmental Impact Assessment Section, Conservation, Assessment and Monitoring Division (CAM).

If you have any questions or concerns, please do not hesitate to contact Patrick at 920-6118 or patrick_clancy@gov.nt.ca.

Sincerely,



Patrick Clancy
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Department of Environment and Natural Resources
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